

## **DETAILED ACTION**

### ***Drawings***

1. Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Information Disclosure Statement***

2. Note that the seventh listed foreign reference number on the IDS has been corrected from '528 to '518.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1 and 3-6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2 and 6-8 of copending Application No. 10/587,861. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the limitations of the instant claims are fully envisioned and encompassed in the co-pending claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is indefinite because it is unclear whether the absorbent and insoluble compounds are being positively recited as being housed within the deposition vessel. For examination, it is assumed that the language intends to recite intended use for the vessel, however language such as "configured to house..." or "for housing..." is recommended to clearly define the claimed structure. Claims 2-6 are rejected for depending from a rejected parent claim.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Cooper (4,069,117).

9. Cooper '117 teaches a system for removing carbon dioxide from exhaust gas, comprising a carbon dioxide absorber (51) with an exhaust inlet (50), an alkaline absorbent introduction port (58), a scrubbed exhaust outlet (52), a rich absorbent outlet (53), a reflux line (56) for returning alkaline absorbent to the absorber, and a settler vessel (54) in the reflux line for removing solids from the absorbent (see figure 1, col. 2, lines 29-55). The settler is capable of removing any type of insoluble compound and the types of absorbent and insoluble compounds do not limit the claims in a way that distinguishes over the prior art structure.

10. Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Say et al. (4,180,548).

11. Say et al. '548 teach a system for removing carbon dioxide from a gas mixture, comprising a carbon dioxide absorber (2) with an exhaust inlet (1), an alkaline absorbent introduction port (22), a scrubbed exhaust outlet (24), a rich absorbent outlet (3), a reflux line (5, 14, 23) for returning alkaline absorbent to the absorber, and a filter (16, 17) in the reflux line for removing solids from the absorbent. The alkaline absorbent can be an alkali metal carbonate solution (see figure, col. 4, line 29 to col. 5, line 39). The filter is capable of removing any type of insoluble compound and the types of absorbent and insoluble compounds do not limit the claims in a way that distinguishes over the prior art structure.

***Allowable Subject Matter***

12. Claims 2 and 3 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
13. Claims 7-9 are allowed.
14. The following is an examiner's statement of reasons for allowance: The prior art of record fails to disclose the step of increasing an absorption amount by repeatedly causing the gas-liquid contact of the absorbent with the exhaust gas until a concentration corresponding to that of the carbon dioxide absorbed by the alkaline liquid reaches a specified value and the depositing step in combination with the other recited steps.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references listed on the attached PTO-892 form disclose gas scrubbing systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Frank M. Lawrence/  
Primary Examiner, Art Unit 1797